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(FILE 'HOME' ENTERED AT 16:39:53 ON 20 SEP 2003)

FILE 'REGISTRY' ENTERED AT 16:40:04 ON 20 SEP 2003

L1               STRUCTURE UPLOADED  
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\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

Structure attributes must be viewed using STN Express query preparation.

L3               5 SEA FILE=REGISTRY SSS FUL L1

100.0% PROCESSED   1938 ITERATIONS  
SEARCH TIME: 00.00.01

5 ANSWERS

=> fil capl

FILE 'CAPLUS' ENTERED AT 16:41:12 ON 20 SEP 2003

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FILE COVERS 1907 - 20 Sep 2003 VOL 139 ISS 13

FILE LAST UPDATED: 19 Sep 2003 (20030919/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

'FIONA' IS DEFAULT FORMAT FOR 'CAPLUS' FILE

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L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN

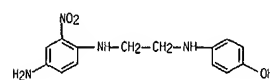
ACCESSION NUMBER: 2001:31580 CAPLUS  
 DOCUMENT NUMBER: 134:102212  
 TITLE: Novel dyes and colorants suitable for dyeing human hair  
 INVENTOR(S): Hollenberg, Detlef; Hoffkes, Horst; Foitzik, Joachim-Kurt; Rose, David; Naumann, Frank; Wolfram, Leszek J.  
 PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft auf Aktien, Germany  
 SOURCE: PCT Int. Appl., 64 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO.  | DATE     |
|---|------|----------|------------------|----------|
| WO 2001002492   | A1   | 20010111 | WO 2000-EP6159   | 20000701 |
| W: AE, AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CR, CU, CZ, DM, EE, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |      |          |                  |          |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  |      |          |                  |          |
| DE 19930927   | A1   | 20010111 | DE 1999-19930927 | 19990706 |
| EP 1189993  | A1   | 20020327 | EP 2000-949238   | 20000701 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO   |      |          |                  |          |
| JP 200304447  | T2   | 20030204 | JP 2001-508272   | 20000701 |
| PRIORITY APPLN. INFO.: DE 1999-19930927 A 19990706<br>WO 2000-EP6159 W 20000701   |      |          |                  |          |

ABSTRACT:  
 The hybrid dyes have the structure XSY, where X represents a chromophoric group that is derived from a direct dye, Y represents a group that is derived from a coupler- or developer-type oxidn. dye precursor, an indole deriv. as a precursor of melanins, or a direct dye, and S represents a direct bond or a spacer group, provided that S does not represent an alkylene or mono- or polyhydroxyalkylene group if Y is derived from a direct dye. The use of colorants contg. these dyes avoids or significantly minimizes a no. of problems that occur with the use of complex dye mixts. Thus, 1-[[3-[(4-aminophenyl)amino]propyl]amino]anthraquinone-3HCl (I) was prepd. by alkylation of 3-(p-nitroanilino)propylamine with 1-chloroanthraquinone, followed by hydrogenation using 5% Pd on charcoal. A hair cream formulation contg. I and 2-(2,4-diaminophenoxy)ethanol was applied to hair and developed with F202 soln. to provide a bluish gray shade.

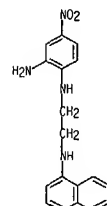
L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

IT 318969-25-4P 318969-26-5P 318974-94-6P.  
 4-[[2-(2,4-dinitroamino)ethyl]amino]phenol sulfate  
 RL: BUU (Biological use, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
 (hybrid dyes and colorants suitable for dyeing human hair)  
 RN 318969-25-4 CAPLUS  
 CN Phenol, 4-[[2-[(4-amino-2-nitrophenyl)amino]ethyl]amino]-, dihydrochloride (9CI) (CA INDEX NAME)



● HC1

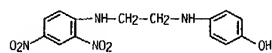
RN 318969-26-5 CAPLUS  
 CN 1,2-Benzenediamine, N1-[2-(1-naphthalenylamino)ethyl]-4-nitro- (9CI) (CA INDEX NAME)



RN 318974-94-6 CAPLUS  
 CN Phenol, 4-[[2-[(2,4-dinitrophenyl)amino]ethyl]amino]-, sulfate (salt) (9CI) (CA INDEX NAME)  
 CM 1

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

CRN 318974-93-5  
 CNF C14 H14 N4 O5

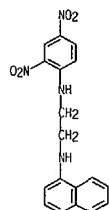


CM 2

CRN 7664-93-9  
 CNF H2 O4 S



IT 318969-27-6P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (hybrid dyes and colorants suitable for dyeing human hair)  
 RN 318969-27-6 CAPLUS  
 CN 1,2-Ethanediamine, N-(2,4-dinitrophenyl)-N'-1-naphthalenyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

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FILE 'CAOLD' ENTERED AT 16:42:06 ON 20 SEP 2003  
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FILE COVERS 1907-1966

FILE LAST UPDATED: 01 May 1997 (19970501/UP)

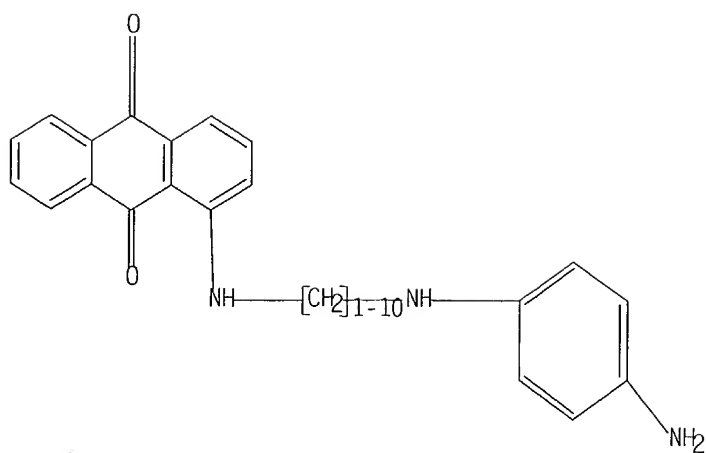
This file contains CAS Registry Numbers for easy and accurate substance identification. Title keywords, authors, patent assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE display formats.

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0 L3



Structure attributes must be viewed using STN Express query preparation.  
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Page 5

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L10 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN

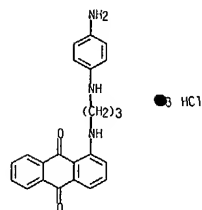
ACCESSION NUMBER: 2001:31580 CAPLUS  
 DOCUMENT NUMBER: 134:102212  
 TITLE: Novel dyes and colorants suitable for dyeing human hair  
 INVENTOR(S): Hollenberg, Detlef; Hoffkes, Horst; Foitzik, Joachim-Kurt; Rose, David; Naumann, Frank; Wolfram, Leszek J.  
 PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft auf Aktien, Germany  
 SOURCE: PCT int. Appl., 64 pp.  
 CODEN: PIXY02  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO.  | DATE     |
|---|------|----------|------------------|----------|
| WO 2001002492   | A1   | 20010111 | WO 2000-EP6159   | 20000701 |
| W: AE, AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CR, CU, CZ, DM, EE, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG |      |          |                  |          |
| DE 19930927   | A1   | 20010111 | DE 1999-19930927 | 19990706 |
| EP 1189993  | A1   | 20020327 | EP 2000-949238   | 20000701 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO   |      |          |                  |          |
| JP 200304447  | T2   | 20030204 | JP 2001-508272   | 20000701 |
| PRIORITY APPLN. INFO.: DE 1999-19930927 A 19990706  |      |          |                  |          |
| WO 2000-EP6159 W 20000701   |      |          |                  |          |

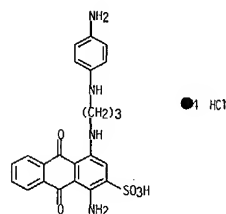
ABSTRACT:  
 The hybrid dyes have the structure XS<sub>Y</sub>, where X represents a chromophoric group that is derived from a direct dye. Y represents a group that is derived from a coupler- or developer-type oxidn. dye precursor, an indole deriv. as a precursor of melanins, or a direct dye, and S represents a direct bond or a spacer group, provided that S does not represent an alkylene or mono- or polyhydroxyalkylene group if Y is derived from a direct dye. The use of colorants contg. these dyes avoids or significantly minimizes a no. of problems that occur with the use of complex dye mixts. Thus, 1-[[3-[(4-aminophenyl)amino]propyl]amino]anthraquinone-3HCl (I) was prepd. by alkylation of 3-(p-nitroanilino)propylamine with 1-chloroanthraquinone, followed by hydrogenation using 5% Pd on charcoal. A hair cream formulation contg. I and 2-(2,4-diaminophenoxy)ethanol was applied to hair and developed with H2O2 soln. to provide a bluish gray shade.

L10 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

IT 318969-23-2P 318969-24-3P  
 RL: BIU (Biological use, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
 (hybrid dyes and colorants suitable for dyeing human hair)  
 RN 318969-23-2 CAPLUS  
 CN 9,10-Anthracenedione, 1-[[3-[(4-aminophenyl)amino]propyl]amino]-, trihydrochloride (9CI) (CA INDEX NAME)



RN 318969-24-3 CAPLUS  
 CN 2-Anthracenesulfonic acid, 1-amino-4-[[3-[(4-aminophenyl)amino]propyl]amino]-9,10-dihydro-9,10-dioxo-, tetrahydrochloride (9CI) (CA INDEX NAME)



L10 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN

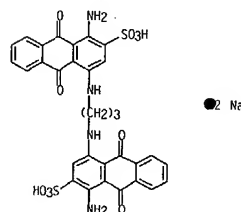
ACCESSION NUMBER: 1970:80348 CAPLUS  
 DOCUMENT NUMBER: 72:80348  
 TITLE: Anthraquinone dyes and their intermediates  
 INVENTOR(S): Simonnet, Andre; Cabut, Louis  
 PATENT ASSIGNEE(S): Ugine Kuhlmann  
 SOURCE: Fr., 4 pp.  
 CODEN: FRXXAK  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE     |
|------------|------|----------|-----------------|----------|
| FR 1529724 |      | 19680621 | FR              | 19670421 |

GRAPHIC IMAGE: For diagram(s), see printed CA Issue.

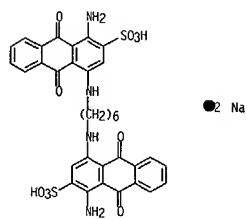
ABSTRACT:  
 I, where R is alkylene or cycloalkylene give blue shades on nylon. Thus, Na 1-amino-4-(3-aminopropylamino)anthraquinone-2-sulfonate 6 was treated with Na 1-amino-4-bromoanthraquinone-2-sulfonate 8,35 and water 42 in the presence of NaOH 2.1 and CuSO4 0.33 part at 80.degree. for 6 hr to give II[R = (CH2)3, X = H], a blue powder, reddish blue on nylon. Similarly prepd. were the following I (R, X, and shade on nylon given): (CH2)6, H, reddish blue; 1,4-cyclohexylene, H, blue; A, H, reddish blue; (CH2)6, SO3Na, blue.

IT 23386-34-7P 23409-75-8P  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (prepn. of)  
 RN 23386-34-7 CAPLUS  
 CN 2-Anthracenesulfonic acid, 4,4'-(trimethylenedimino)bis[1-amino-9,10-dihydro-9,10-dioxo-, disodium salt (8CI) (CA INDEX NAME)



RN 23409-75-8 CAPLUS  
 CN 2-Anthracenesulfonic acid, 4,4'-(hexamethylenedimino)bis[1-amino-9,10-

L10 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)  
dihydro-9,10-dioxo-, disodium salt (8CI) (CA INDEX NAME)



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(FILE 'HOME' ENTERED AT 16:02:52 ON 20 SEP 2003)

FILE 'CAPLUS' ENTERED AT 16:03:09 ON 20 SEP 2003

L1 2 S (SUBSTANTIVE (W) (DYE OR DYESTUFF OR COLORANT)) (L) ((OXIDATI

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L1 2 SEA FILE=CAPLUS ABB=ON PLU=ON (SUBSTANTIVE (W) (DYE OR  
DYESTUFF OR COLORANT)) (L) ((OXIDATION DYE PRECURSOR) OR  
(INDOLE OR INDOLINE))

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LI ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 1960:15493 CAPLUS  
 DOCUMENT NUMBER: 54:15493  
 ORIGINAL REFERENCE NO.: 54:3022d-g  
 TITLE: Halation-prevention and filtering layers for photographic materials  
 INVENTOR(S): Burgardt, Lothar; Wahl, Ottmar  
 PATENT ASSIGNEE(S): Agfa Akt.-Ges.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE |
|------------|------|----------|-----------------|------|
| DE 1003573 |      | 19570228 | DE              |      |

ABSTRACT:  
 Diffusion-fast adducts of basic dyes and acidic substantive  
 \*\*\*dyes\*\*\* formed by condensation of carbazolealdehydes the N of which has been substituted by org. residues or indolealdehyde derivs. on one side, and compds. with active methylene groups on the other side, are, together with gelatin suitable for the production of clearly colored layers, recommended as halation protection and filtering layers. The spectral absorption is, save an extension, not altered. Suitable basic dyes are: fuchsin, paraufuchsin, neofuchsin, methyl violet, malachite green, Brilliant Green, and dyes of the type 2-[p-(diethylamino)styryl]-3,3-di-R-indolemethochloride, where R = H or Me. A suitable substantive dye, 3-(2-benzoyl-2-cyanovinyl)  
 \*\*\*indole\*\*\* -2-carboxylic acid was prepd. by refluxing 19 g. 3-formylindole-2-carboxylic acid (Shabica, et al., C.A. 40, 57213) and 14.5 g. 2-cyanoacetophenone in 150 ml. MeOH for 30 min. The pptd. dye is applied in the form of its Na salt.

LI ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 1960:9189 CAPLUS  
 DOCUMENT NUMBER: 54:9189  
 ORIGINAL REFERENCE NO.: 54:1877c-1,1878a-e  
 TITLE: Aromatic tricyanovinyl derivatives  
 INVENTOR(S): Heckert, Richard E.  
 PATENT ASSIGNEE(S): E. I. du Pont de Nemours & Co.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE |
|------------|------|----------|-----------------|------|
| US 2889335 |      | 19590602 | US              |      |
| DE 1099671 |      |          | DE              |      |

ABSTRACT:  
 A series of new, cryst., substantive dyes for natural and synthetic fibers of the general formula p-RR'-NC6H4C(CN)2 (I), where R is H, hydrocarbon, or substituted hydrocarbon, and R' is hydrocarbon or substituted hydrocarbon, was prepd. Thus, p-Me2NC6H4C(CN)2 (II) 20 and KCN 13 in 50% aq. EtOH 180 heated 3-4 min. on the steam bath with stirring, filtered, dild. with H2O 200 contg. AcOH 21 parts, and filtered yielded p-Me2NC6H4C(CN)2 (III), m. 138-9.degree. (60% aq. EtOH). III 20 in AcOH 210 heated 2 hrs. with stirring at 100.degree. with Pb(OAc)4 44, dild. with AcOH 52, and cooled slowly to room temp. gave p-Me2NC6H4C(CN)2 (IV) 7.8 parts, dark blue needles, .lambda.max. 515 m.m.u. (epsilon, 36,200). Bz2O2 will also oxidize III to IV. [C(CN)2]2 (V) 10 in tetrahydrofuran 266 treated dropwise with PhNHMe 12.8, the solvent boiled off on the steam bath, and the residue recrystd. from MeOH gave p-Me2NC6H4C(CN)2 (VI) 20 parts, bright blue solid, epsilon 500 33,250. V 10 in dry tetrahydrofuran 178 treated with PhNHMe2 19.3, refluxed on the steam bath, and evapd. gave IV 16 parts, epsilon 515 33,750. V 50 and 2,6-Me2C6H3NH2 50, gave 3,5,4-Me2(H2N)C3H3C(CN)2 (VII) 45 parts, brilliant dark blue, m. 288-9.degree. (MeNO2), epsilon 500 35,500. V 128 and 1-methylpyrrole 89 gave 1-methyl-2-(tricyanovinyl)pyrrole 130 parts, bright yellow, m. 182-3.degree. (EtOH), epsilon 388 18,200. V 128 and pyrrole 67 gave 2-(tricyanovinyl)pyrrole 75 parts, yellow-orange, m. 211-13.degree. with some decompn. starting at 205.degree., epsilon 428 25,700. MePhN(CH2)2CN 56 and V 50 gave p-Me(NCCH2CH2)NC6H4C(CN)2 (VIII) 218 parts, m. 159-60.degree., epsilon 498 30,500. V 50 and BuPhN(CH2)2CN 71 gave about 66% pure p-Bu(NCCH2CH2)NC6H4C(CN)2 (IX) 52 parts, m. 128-9.degree., epsilon 505 35,000 (approx.). V 50 and tetrahydroquinoline 50 gave 6-tricyanovinyl-1,2,3,4-tetrahydroquinoline 65 parts, m. 187.degree., epsilon 525 24,300 (70% pure). Ph2NH 70 and V 50, yielded p-PhNH6H4C(CN)2 (X) 63 parts, m. 157-8.degree., epsilon 512 37,000. V 50 and PhNHCH2CH2OH 55, gave p-HOCH2CH2NC6H4C(CN)2 (XI), red-brown, m. 162-3.degree., epsilon 502 32,600. V 50 and PhNHCH2CH2CN 58, gave p-NCCH2CH2NC6H4C(CN)2 (XII) (VI), 33.5 parts.

LI ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)  
 m. 131-2.degree., epsilon 437 32,900. V 42 and o-MeC6H4NHCH2CH2CN 53, gave 3,4-Me(NCCH2CH2NH)C6H3C(CN)2 (XIII) 37.8 parts, m. 161-2.degree., epsilon 485, 30,300. V 50 and 2,6-Me2C6H3OH 48, gave 3,5,4-Me2(HO)C6H2C(CN)2 (XIV) 27 parts, black crystals, m. 184-5.degree., which on heating or exposure to air become red and finally orange; the mother liquor gave 2nd crop 47 parts; the combined black VII recrystd. twice from AcOH gave VII 25 parts, orange needles, m. 182-3.degree. (decompn.); bright yellow in d11, acid and deep burgundy in alkali, epsilon 538 48,000 (EtOH contg. 5% Et3N), epsilon 426 21,200 (EtOH contg. 1% AcOH). V 9.5 and PhNEt2 10 gave p-Et2NC6H4C(CN)2 (XV), dark blue, m. 164.degree. (AcOH), epsilon 521 46,500; it gives red dyeings on Dacron fibers and blue-red dyeings on Orlon; when boiled in an aq. dye bath of pH 4, it is 50% destroyed in 5.5 hrs. Similarly were prepd. the following I (R, R', m.p., absorption max. in Me2CO in m.m.u., and mol. extinction coeff. given): HO2CCH2, H, 235-7.degree., 488, 37,100; iso-Am, H, 120-1.degree., 503, 44,400; PhCH2, H, 150-1.degree., 498, 417,500; o-HO2CC6H4, H, 215-16.degree., 483, 27,400; 1-ClOH7, H, 210-12.degree., 498, 36,800; ClCH2CH2, Et, 152-3.degree., 507, 43,300; NCCH2CH2, Me, 174-5.degree., 502, 40,000; NCCH2CH2, Et, 159-60.degree., 507, 42,300; NCCH2CH2, NCCH2CH2, 156.degree., 488, 37,200; NCCH2CH2, BzOCH2OCH2CH2, NCCH2CH2, 157-8.degree., 495, 40,300; Pr, Pr, 138-9.degree., 524, 47,300; Bu, Bu, 126-7.degree., 525, 47,100; PhCH2, PhCH2, 167-8.degree., 507, 44,500; BzOCH2CH2, BzOCH2CH2, 185.degree., 505, 41,700; Me, Ph, 108-9.degree., 509, 40,900; Et, Ph, 147-8.degree., 511, 43,500; C6H13, Ph, 88-9.degree., 513, 43,900; Cl2H25, Ph, 77-8.degree., 513, 43,400; Ph, Ph, 174-5.degree., 513, 34,600; and N-(p-tricyanovinylphenyl)morpholine, 188-9.degree., 507, 35,900; p-tricyanovinyljulolidine, 265-6.degree., 555, 47,200; bis[2-(N-methyl-4-(tricyanovinyl)anilino)ethyl] terephthalate, 284-5.degree., 519, 69,100; 3-(tricyanovinyl)indole, 275-6.degree., 453, 20,700. m-ClC6H4COCl 61 added gradually with stirring to MePhNCH2CH2OH 50 in C5H5N 150 at 50-60.degree., stirred 5 min. at 80.degree., cooled to 25.degree., treated gradually with V 44 at 25-35.degree., stirred 5 min. at 55.degree., cooled to 5.degree., treated with AcOH 250, poured with stirring into ice and H2O 2500, and filtered gave 4-Me(m-ClC6H4CO2CH2CH2)NC6H4C(CN)2 (XVI) 64 parts, m. 131-6.degree.; it gave red dyeings with Orlon and Dacron fibers; epsilon 510 40,200; only 17% dye is destroyed when refluxed 22 hrs. in a bath at pH 4. Similarly were prepd. the following compds. p-(RCO2CH2CH2N(Me)C6H4C(CN)2 (R, m.p., .lambda.max. in m.m.u., and mol. extinction coeff. given): EtO2C(CH2)4, 80-2.degree., 510, 41,600; Et2CH, 94-101.degree., 510, 42,600; iso-Bu, 122-5.degree., 510, 43,400; Ph, 141-2.degree., 510, 40,600; p-MeC6H4, 144-5.degree., 511, 41,600; 4,3-Me(CO2N)C6H3, 153-4.degree., 510, 40,600; 1-ClOH7, 179-85.degree., 512, 38,200. IV 3 in HCONMe2 50 added to Na dodecyl sulfate 10 in boiling H2O 1000 parts, heated with stirring at 90-5.degree. until a uniform dispersion is obtained, and skeins of cellulose acetate fibers soaked and stirred 15 min. in this mixt., washed, and dried gave a bright red, light-fast dyeing.

10/031.740

Page 3

=> d que 12 stat

L2            16 SEA FILE=CAPLUS ABB=ON PLU=ON (SUBSTANTIVE DYE) (L) (KERATIN  
                 OR HAIR OR SKIN)

=> d 1-16 ibib iabs

L2 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1970:404955 CAPLUS  
 DOCUMENT NUMBER: 73:4955  
 TITLE: N-(.beta.-Ureidoethyl)-p-phenylenediamine dyes for keratin fibers  
 INVENTOR(S): Kalopissis, Gregoire; Gascon, Jean; Gaston-Breton, Hubert; Bugaut, Andree; Gallien, Jaqueline  
 PATENT ASSIGNEE(S): Oreal S. A.  
 SOURCE: Ger. Offen., 32 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE     |
|------------|------|----------|-----------------|----------|
| DE 1945451 | A    | 19700423 | DE 1969-1945451 | 19690908 |
| DE 1945451 | B2   | 19770804 |                 |          |
| US 3697215 | A    | 19721010 | US 1969-854784  | 19690902 |
| GB 1272329 | A    | 19720426 | GB 1969-1272329 | 19690908 |
| US 4008272 | A    | 19770215 | US 1975-578318  | 19750516 |

PRIORITY APPLN. INFO.:  
 LU 1968-56846 19680909  
 LU 1969-57792 19690116  
 US 1969-854784 19690902  
 US 1972-247892 19720426

GRAPHIC IMAGE: For diagram(s), see printed CA issue.

ABSTRACT:  
 The title compds. (I) were prepd. as dyes for keratin fibers, esp. human hair, with good fastness to light, weathering, and washing. I (R = H), m. 126.degree. (Me2CHOH), was prepd. by reaction of 4-O2NC6H4NHCH2CH2NH2 (I1, R1 = H) with KNCO to give II (R1 = CONH2), m. 187.degree., and redn. with NaHSO3. I (R = Me, MeO, and Cl) were prepd. by reaction of 2,4-R(O2N)C6H3Cl with H2NCH2CH2NH2.HCl, reaction with KNCO, and redn. with H2NNH2 in the presence of Raney Ni or with NaHSO3. Formulations for \*\*\*hair\*\*\* dyes contg. 1. couplers, surface active agents, and \*\*\*substantive\*\*\* dyes in aq. soln. or as creams are reported.

L2 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1960:52976 CAPLUS  
 DOCUMENT NUMBER: 54:52976  
 ORIGINAL REFERENCE NO.: 54:10359f-1,10360a-b  
 TITLE: Action of pyrocatechol and formaldehyde on animal skin. Contribution to the nature of condensation tannage  
 AUTHOR(S): Stather, F.; Reich, G.; Steinhardt, R.  
 CORPORATE SOURCE: German Leather Inst., Freiburg, Germany  
 SOURCE: Revue Technique des Industries du Cuir (1960), 52, 1-10  
 CODEN: RTICAS; ISSN: 0035-4236  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable  
 ABSTRACT:

In a statistically designed expt., pieces of unhaird and delimed calf-\*\*\*skin\*\*\* were tanned with pyrocatechol (I)-HCHO-A12(SO4)3 solns. at 40.degree., and were subsequently washed with H2O and with (NH4)2SO4 soln. to remove excess HCHO. Increasing the duration of the condensation from 8 to 24 hrs. gave a greater vol. yield and better product. Increasing the amt. of HCHO from 2 to 4 moles/mole of I and the A12(SO4)3.18H2O from 3 to 13%, based on the wt. of the stock, gave similar, but less pos. results. Increasing I from 10 to 15%, based on the wt. of the stock, increased the wt. of the leather but decreased leather vol. and quality. The influence on the shrinkage temp. of increasing the following factors from the previously designated lower to higher levels was: condensation time, large increase; HCHO, large increase; 1. moderate increase; A12(SO4)3, no change. A mellower leather was obtained if I was added 1st and the other 2 reagents were subsequently added simultaneously, than if either HCHO or A12(SO4)3 (with addn. of NaCl to inhibit swelling) was added 1st. Results obtained with a com. I prepn. contg. a methyl homolog are discussed. It is postulated that an Al-pyrocatechol complex is formed 1st, by which the reaction of I with HCHO is accelerated; it is not regarded as proved that the condensed I and collagen react according to a Mannich reaction. The process was carried out on a pilot scale in the prepn. of various leathers. Infrared light was used for heating. Best results were obtained by fat-liquoring with anionic sulfonated oils and by dyeing with anionic or \*\*\*substantive\*\*\* dyes. Satisfactory leathers were, in general, obtained by the usual processes. Pretannage by this process accelerates the diffusion of tannin into hides to a greater extent than pretannage with either Cr or HCHO, and it also increases the resistance to shrinkage by sweat. It is suggested that pretannage with I-HCHO-A12(SO4)3 be used in leathers where it is desired to accelerate vegetable tannage or to prep. in sole leather that is very sweat resistant.

L2 ANSWER 3 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1959:91828 CAPLUS  
 DOCUMENT NUMBER: 53:91828  
 ORIGINAL REFERENCE NO.: 53:16548g-h  
 TITLE: Dyeing of keratinaceous fibers  
 INVENTOR(S): Tucker, Harold H.  
 PATENT ASSIGNEE(S): Jos. H. Lowenstein & Sons, Inc.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE |
|------------|------|----------|-----------------|------|
| US 2890094 |      | 19590609 | US              |      |

ABSTRACT:  
 The use of unsatd. monomers in conjunction with substantive \*\*\*dyes\*\*\* gives excellent dyeing of keratin fibers. The addnl. use of a S-contg. reducing agent in the dye bath with the monomer is also helpful. Thus, a natural undyed beaver skin was dyed black by immersion for 90 min. at 49.degree. in a soln. contg. Na2SO4 5, "Ethofat C-15" 1, itaconic acid 50, thiourea 50, Anthraquinone Blue SWF 5, and Calocid Orange Y Extra concentrate 1.50 g. dissolved in 1000 cc. H2O. The initial pH of the soln. was 1.9. The skin was a deeper, more lustrous black than another dyed at 57.degree. without itaconic acid and thiourea.

L2 ANSWER 4 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1954:5447 CAPLUS  
 DOCUMENT NUMBER: 48:5447  
 ORIGINAL REFERENCE NO.: 48:1006g-i  
 TITLE: Fundamentals of the dyeing of cellulosic fibers  
 AUTHOR(S): McCleary, H. R.  
 CORPORATE SOURCE: Am. Cyanamid Co., Bound Brook, NJ  
 SOURCE: Textile Research J. (1953), 23, 673-82  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable  
 ABSTRACT:

A review of the theoretical aspects of the dyeing of cellulose with \*\*\*substantive\*\*\* dyes. The oriented chainlike structure of cellulose contg. amorphous and cryst. regions influences its dyeing properties and the optical appearance of dyed fibers. Dye sorption seems to occur only in the amorphous regions, where single moles of dye are coordinatively bound to cellulose chains. The affinities of dyes for cellulose are obtainable from equil. dye-absorption data. Affinities decrease with increase in temp. Filament size has an effect on the appearance of dyed fibers because of differences in the light which is scattered. The skin structure of rayons slows down the penetration of dye to the interior of the fibers.

L2 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 1952:37611 CAPLUS  
 DOCUMENT NUMBER: 46:37611  
 ORIGINAL REFERENCE NO.: 46:6378a-c  
 TITLE: The swelling and solution mechanism of soda-pulp fibers. VII  
 AUTHOR(S): Schramek, M.; Ahrberg, Lisa  
 CORPORATE SOURCE: Inst. Faserstoff-Forschung, Teltow-Seehof, Germany  
 SOURCE: Holzforschung (1951), 5, 97-106  
 CODEN: HOLZAZ; ISSN: 0018-3830  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable  
 ABSTRACT:  
 cf. C.A. 38, 863.3; 42, 2100d; and Ludtke, C.A. 44, 90121. S. and A. give another series of photomicrographs that appear to throw further light on the nature of L.'s "skin substance" which is now looked upon as the primary wall and the extreme outer layer of the secondary wall of the pulp fiber. Three dissolving pulps were studied: a Borregard spruce sulfite (I), a Walldhoff sulfite (II), and a Norwegian pulp (III). The .alpha.-, .beta.-, and .gamma.-celluloses, lignin no., ash, resin, and degree of polymerization were, for I, II, and III, resp.: 87.1, 85.7, 86.1%; 5.8, 4.2, 5.96%; 5.4, 8.5, 6.88%; 0.13, 0.047, 0.12; 0.15, 0.045, 0.19%; 0.39, -, 0.56%; 760, 490, and 610. The swelling techniques (made in stages, with appropriate staining reactions with \*\*\*substantive\*\*\* dyes) are fully discussed, and photomicrographs indicate the course of the swelling in aq. NaOH, followed by ballooning and soln. during xanthation, carefully controlled by addn. of low concns. of aq. Na2SO4. S. and A. are in agreement with Dolmetch, Franz, and Correns (C.A. 38, 6091.2) in believing that the interpretation of Ludtke requires modification. Conflicting data in the literature are discussed briefly.

L2 ANSWER 6 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 1962:25102 CAPLUS  
 DOCUMENT NUMBER: 46:25102  
 ORIGINAL REFERENCE NO.: 46:4244g-i  
 TITLE: Dyeing only the flesh side of chrome-tanned fur skins  
 INVENTOR(S): Luscher, Ernst; Engeloch, Albert  
 PATENT ASSIGNEE(S): Sandoz Ltd.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE |
|------------|------|----------|-----------------|------|
| US 2583269 |      | 19520122 | US              |      |

ABSTRACT:  
 The flesh side of hair skins, previously chrome-tanned and buffed, are dyed exclusive of the wool or fur hair with \*\*\*substantive\*\*\* dyes in the presence of soaps or surfactants, such as alkaryl and fatty alc. sulfonates, oleic methyltauride, oleic esters of hydroxy-ethanesulfonic acid, and the sulfonates of glycerol monooleate esters. These products are added to the dye bath at 0.25-3 g./l. of dye bath at 40-50.degree.. A more penetrating dyeing is obtained by adjustment of the dye bath to a max. pH of 9.2 with NH3 and acidifying to a min. pH of 3.3 shortly before dyeing is completed.

L2 ANSWER 7 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 1952:16263 CAPLUS  
 DOCUMENT NUMBER: 46:16263  
 ORIGINAL REFERENCE NO.: 46:2806g-h  
 TITLE: Theory of dyeing. XIII. Effect of pH of the dye-bath on binding of acid and substantive dyes by wool keratin  
 AUTHOR(S): Sokolova, N. V.  
 SOURCE: Zhurnal Prikladnoi Khimii (Sankt-Peterburg, Russian Federation) (1948), 21, 966-75  
 CODEN: ZPKHAB; ISSN: 0044-4618  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable  
 ABSTRACT:  
 cf. C.A. 45, 5931b. Acid and substantive dyes are bound by wool at all pH values from 1 to 8, the amt. of dye fixed (A mg.-equivs. per 100 g. of wool) increasing with diminishing pH; a satn. value of 80 is reached in 2-3 hrs. at pH 3-4 in the case of molecularly dispersed dyes, but not for colloidal dyes, which cannot penetrate into the interior of the fibers. At pH < 2, values of A > 80 are obtained, owing to hydrolysis of keratin. Introduction of wool into buffer solns. at pH < 4.5 raises the pH by about 1.

L2 ANSWER 8 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 1946:7514 CAPLUS  
 DOCUMENT NUMBER: 40:7514  
 ORIGINAL REFERENCE NO.: 40:1313h-i,1314a-b  
 TITLE: Structure of viscose fibers with skin effect  
 AUTHOR(S): Wuhmann, K.  
 CORPORATE SOURCE: Eidg. Materialprufungs- Versuchsanstalt, St. Gallen  
 SOURCE: Helvetica Chimica Acta (1945), 28, 666-74  
 CODEN: HCACAV; ISSN: 0018-019X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: German  
 ABSTRACT:  
 When, on extrusion of the xanthate soln. from the spinneret into the coagulating bath, coagulation takes place at such a high rate that a surface \*\*\*skin\*\*\* of cellulose is formed, the latter retards access of the coagulating liquid to the central portion of the fiber which, consequently, coagulates much later. This results in an oriented membrane on the fiber surface and an unoriented central portion. The quant. optical investigation of such fibers confirmed the fact that the surface skins give much higher double refractive indexes than the central portion. Hence, the degree of orientation and the d. of packing of the 2 phases vary considerably. The differences in texture are apparent in one and the same fiber spun under various degrees of stretch. It is concluded that the skin formation depends primarily upon the compn. of the coagulating bath, whereas the draft to which the filament is subjected influences only the magnitude of orientation in the 2 phases but not the ratio to each other. The affinity for dyes of the 2 portions varies a great deal, the central portion always having a greater affinity than the skin, which exhibits only very slight or no dyestuff adsorption. This difference in dyeing behavior was observed whether \*\*\*substantive\*\*\* dyes or gold solns. in H2O and MeOH were used and cannot be explained solely by the difference in structure.

L2 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2003 ACS ON STN

ACCESSION NUMBER: 1940:27932 CAPLUS

DOCUMENT NUMBER: 34:27932

ORIGINAL REFERENCE NO.: 34:4271g-i, 4272d-i, 4273a-b

TITLE: Increasing the fastness of dyeing with sulfur dyes

AUTHOR(S): Khailov, I. M.; Ivanova, O. V.

SOURCE: Khlopatobumazhnaya Prom. (1937), 7(No. 11), 46-52

From: Chem. Zentr. 1938. II, 954-5

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

ABSTRACT:

Difficulties are encountered in the purification of S dyes. The purified dyes go into the vat less easily than the tech. product; the latter have a colloidal structure, which is altered by purification. The impossibility of obtaining the S dyes in the cryst. condition explains to a certain degree their lack of fastness to rubbing when wet. Certain S dyes are not homogeneous; they contain considerable amts. of dyestuffs sol. in water and weak soda solns. These are compds. of the type of primuline or products of oxidation in the air of the type of Nigrosulfine. This condition is especially pronounced with Thiogene Heliotrope O (I), Katigene Yellow GGD (II), Sulfur Pure Blue A T (III), and Pyrogene Brown 4 R and these dyes show the least fastness to washing and rubbing. These are, rather, substantive dyes since some of them in large part go into soln. in 3% soda. The washed ppts. and filtrates from I and III were investigated. Upon heating the filtrate with HCl the color did not change; this suggests the absence of indophenol. The filtrate possessed slight substantivity; the coloration was intensified by the addn. of Na<sub>2</sub>S. III contained products of the oxidation and incomplete sulfurization of the S dye. Katigene Yellow GGD and other S dyes contain impurities of the primuline type which are responsible for the lack of fastness. The same is true for Sulfur Blue "RL." The color and fastness, especially the fastness to rubbing, are influenced by insol. substances adsorbed during dyeing. Solns. of S dyes which have been allowed to settle give fast colors. The influence of reducing agents and protective colloids was studied. The use of 1 part dye, 4 parts NaOH of 40 degree, 8 acte.e. and 1.8 parts concd. hyposulfite with a bath temp. of 55 degree, gave brighter and faster colors than the use of 2 parts Na<sub>2</sub>S and 30 parts NaCl (85-90 degree.) or 2 parts glucose, 4 parts NaOH (40 degree, 8 acte.e.) and 30 parts NaCl to 1 part of dye. This was particularly true for Sulfur Blue K, Sulfur Yellow and Sulfur Black. Casein and glue in concns. of 5-100% of the dye were used to study the effect of protective colloids. An inverse ratio existed between the thoroughness of the dyeing and the amt. of protective colloid. Casein does not increase the fastness of the dye although glue does, the optimum amt. of the latter being 25% by wt. of the dye. Artificial resins have an effect similar to that of glue (in the presence of Na<sub>2</sub>S) (10 g. phenol, 20 cc. 40% HCHO and 7.5 cc. 40 degree, 8 acte.e. NaOH were used per l. of dye bath). Finishing with 5-10 g. glue per l. reduces the color in every respect. Treatment of the dye with "Fixateur T," tannin, CH<sub>2</sub>ClCO<sub>2</sub>Na, increases the fastness to light and to washing. When S dyes are treated with Cu salts, adsorption occurs or extremely

L2 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2003 ACS ON STN (Continued)

unstable compds. of Cu with the S dye are formed. The amts. of CuSO<sub>4</sub> adsorbed by the following dyes were: by Sulfur Yellow-Brown B (with 13% free S) 28% (without free S) 18%; by Sulfur Blue P 20%; and by Sulfur Brilliant Green 25%. Treatment of the dyed fabric with CuSO<sub>4</sub> increases the fastness to light, especially in dyes with a thiazole structure and yellow-orange shades. In the presence of disulfite the shade is little changed by the Cu salt; the fastness to light, however, is less. For this treatment: 3% CuSO<sub>4</sub>·5H<sub>2</sub>O (calcd. on wt. of fabric) and 2-3% of 30% H<sub>2</sub>OAc are used with a bath temp. of 60 degree, and a bath concn. of 1:30. Even the fastness to washing is somewhat increased by the Cu salt. If, instead of treating the dyed fabric, the dye is treated before dyeing by heating for 3 hrs. at 90 degree, with 35% CuSO<sub>4</sub>, similar results are obtained and the shade of color is even less changed. The Cu treatment appears to be suitable for S dyes which change color tone sharply after treatment and which do not come into contact with the human skin. Treatment of dyes with salts of Cr, Zn, Mo, W and Al changes the color only slightly; with the exception of Sulfur Black and Sulfur Brown, the fastness to light is increased by these salts; the fastness to washing is somewhat increased by Zn(OAc)<sub>2</sub>. On the basis of the exptl. results the following recommendations are made for the use of S dyes: In order to increase the fastness to light: treatment with Cu salts, with "Fixateur T," with anhydroform-o-toluidine, or with CH<sub>2</sub>ClCO<sub>2</sub>Na. Fastness to light is improved to a less degree by chrome alum, Cr(OAc)<sub>3</sub>, and Mo-W salts. Fastness to washing and rubbing is improved by purifying the dye from free, insol. S, allowing the soln. to settle and filtering, the addn. of protective colloids, soaping after dyeing, dressing with glue, etc., and combined dyeing, as, e. g., for bright green: 4% Sulfur Pure Blue + 4% Sulfur Yellow + 15% Na<sub>2</sub>S + 30% NaCl + 3% Na<sub>2</sub>CO<sub>3</sub>.

L2 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2003 ACS ON STN

ACCESSION NUMBER: 1935:15694 CAPLUS

DOCUMENT NUMBER: 29:15694

ORIGINAL REFERENCE NO.: 29:2018b-d

TITLE: The preparation of a chrome-tanned black calf-leather

AUTHOR(S): Barsuk, A.

SOURCE: Kozhevenno-Obuvnaya Promyshlennost SSSR (1933), 12, 31

CODEN: KOPSAX; ISSN: 0375-9288

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

ABSTRACT:

A calf leather which was previously tanned was planed on the grain side, neutralized, treated with 2% of pure fats, dried, unhardened and nailed on frames. The skin was then worked over with grinding stones and the final treatment was given with pumice stone. Skins with a light nap were worked over with a wire brush (by hand). The skins were finally dyed with 15% (of their dry wt.) of substantive dyes and 4.5% NH<sub>4</sub>OH, the mixt. being dild. with 50% water. The skins were moistened before dyeing. A number of other formulas for dyeing are given and the operations are described.

L2 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2003 ACS ON STN

ACCESSION NUMBER: 1924:12998 CAPLUS

DOCUMENT NUMBER: 18:12998

ORIGINAL REFERENCE NO.: 18:1756g-i

TITLE: Dyes: dyeing: intermediate products

PATENT ASSIGNEE(S): Soc. anon. pour l'Ind. chim. a Bale

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE |
|------------|------|----------|-----------------|------|
| GB 209723  |      | 19231222 | GB              |      |

ABSTRACT:

Azo dyes contg. one or more cyanuric nuclei are prepd. either by coupling suitable components one or both of which contain cyanuric nuclei, or by uniting azo dyes together or with other compds. by means of cyanuric halides. The products include acid, mordant, and substantive dyes; the latter may be diazotizable on the fiber or may be developed on the fiber with diazo compds., or may be suitable for after-treatment with metal salts or with HCHO. Sol. metal compds. of the dyes, and products solubilized by the introduction of methyl-w-sulfonic groups into the amino groups, are also included. The dyes may also be prepd. on the fiber by impregnation with the intermediate cyanuric compds. and developing either by diazotizing and coupling or by a diazo compd. The dyes may also be used in the prepn. of lakes, or for dyeing skins, leather, etc. The intermediate compds. are prepd. by replacing one or more of the halogen atoms of cyanuric halides by appropriate radicals; these may be the residue of an aminonaphthol or deriv. thereof, or another residue which contains groups which render the product suitable as a diazo or coupling component; or a residue which, though not of the above type, contains atoms or groups which affect the tinctorial properties of the dye, for instance acylamino, alkoxy, aryloxy, acyloxy, nitro, carboxy, methyl, sulfonic, etc. Examples are given.

L2 ANSWER 12 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1921:20869 CAPLUS  
DOCUMENT NUMBER: 15:20869  
ORIGINAL REFERENCE NO.: 15:3914d-f  
TITLE: Chamois leather  
AUTHOR(S): Kohnstein, B.  
SOURCE: Collegium (Darmstadt) (1921) 338-9  
CODEN: COLLA6

DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable

ABSTRACT:  
The usual methods of producing chamois leather are described. Most of this leather is made from deer or chamois skins, but sheepskins and, for piano key or buffing leather, steer hides are used. Recent methods of unhairing sheepskins are by sweating, to save lime, or by a lukewarm soln. of  $(\text{NH}_4)_2\text{CO}_3$  (5 g. per 1.). For tanning, a strongly oxidizable fish oil is used with  $\text{CuSO}_4$  as a catalyst. Some skins have lately been dyed with acid or substantive dyes after retanning with Cr. Bleaching may be by sunlight or by a 0.5% soln. of  $\text{KMnO}_4$  followed by a dil.  $\text{H}_2\text{O}_2$  Soln. (100 cc.  $\text{H}_2\text{O}_2$  and 100 cc.  $\text{H}_2\text{SO}_4$  in 2 l. water).

L2 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1921:20868 CAPLUS  
DOCUMENT NUMBER: 15:20868  
ORIGINAL REFERENCE NO.: 15:3914d-f  
TITLE: Chamois leather  
AUTHOR(S): Kohnstein, B.  
SOURCE: Haute und Lederberichte (1920), (No. 23)  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable

ABSTRACT:  
The usual methods of producing chamois leather are described. Most of this leather is made from deer or chamois skins, but sheepskins and, for piano key or buffing leather, steer hides are used. Recent methods of unhairing sheepskins are by sweating, to save lime, or by a lukewarm soln. of  $(\text{NH}_4)_2\text{CO}_3$  (5 g. per 1.). For tanning, a strongly oxidizable fish oil is used with  $\text{CuSO}_4$  as a catalyst. Some skins have lately been dyed with acid or substantive dyes after retanning with Cr. Bleaching may be by sunlight or by a 0.5% soln. of  $\text{KMnO}_4$  followed by a dil.  $\text{H}_2\text{O}_2$  Soln. (100 cc.  $\text{H}_2\text{O}_2$  and 100 cc.  $\text{H}_2\text{SO}_4$  in 2 l. water).

L2 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1916:971 CAPLUS  
DOCUMENT NUMBER: 10:971  
ORIGINAL REFERENCE NO.: 10:197f-1,198a-1  
TITLE: Some Aminoazimido bases and their azo dye derivatives  
AUTHOR(S): Kym, O.; Ringer, M.  
CORPORATE SOURCE: Univ. Zurich  
SOURCE: Ber. (1915). 48, 1671-85  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable  
GRAPHIC IMAGE: For diagram(s), see printed CA Issue.

ABSTRACT:  
cf. C. A. 6, 356. As was expected, the azo dye derivs. of azimidobenzene compds.,  $\text{C}_6\text{H}_4\text{NH.N.N}$ , having a 5-membered ring similar to that of benzimidazole, benzothiazole or benzoxazole compds.,  $\text{C}_6\text{H}_4\text{R.CH.N}$  (R-NH, S or O), are substantive dyes capable of dyeing cotton directly without mordants, although they stand behind the imidazole compds. in this respect. 5-Nitro-2,3-toluylenediamine (a), in 50% yield from 10 g. 2,3,5-H<sub>2</sub>N(O<sub>2</sub>N)2C<sub>6</sub>H<sub>2</sub>Me in 33 cc. boiling alc. treated with 18 g. crystd. Na<sub>2</sub>S in 30 cc.  $\text{H}_2\text{O}$ , then dild. with 4 vols. cold  $\text{H}_2\text{O}$ , the red cryst. ppt. dissolved in cold dil. HCl, filtered, pptd. with  $\text{NH}_3$  and crystd. from dil. alc., felted orange-red needles, m. 185.degree., easily sol. in dil. HCl; diacetyl derivative, obtained with Ac<sub>2</sub>O on the  $\text{H}_2\text{O}$  bath, pale yellow needles from dil. alc., m. 234.degree., insol. in cold dil. HCl, but dissolves on warming;  $\text{NH}_3$  now, however, ppts. the anhydro compd., 5-nitro-1- $\alpha$ -dimethylbenzimidazole,  $\text{Me}(\text{O}_2\text{N})\text{C}_6\text{H}_2\text{NH.CMe.N}$ , obtained directly by boiling (a) 4 hrs. with AcOH, dildg. with much cold  $\text{H}_2\text{O}$ , filtering, making just alk. with  $\text{NH}_3$  and crystg. from  $\text{H}_2\text{O}$ : it m. 186.degree., and dissolves easily in dil. HCl and also, with pure yellow color, in cold dil. NaOH. 5-Nitro-1-methylbenzimidazole, from (a) boiled a long time with  $\text{HCO}_2\text{H}$ , needles from  $\text{H}_2\text{O}$ , m. 199-200.degree., sol. in dil. HCl and, with yellow color, in dil. NaOH. 5-Nitro-1-methyl- $\alpha$ -hydroxybenzimidazole, from 1 g. (a) and 2.5 g. urea heated 1 hr. at 160-70.degree. until a solid cryst. mass is formed (evolution of  $\text{NH}_3$ ), dissolved in warm dil. NaOH, filtered, pptd. with dil. HCl and crystd. from much hot  $\text{H}_2\text{O}$ , hair-like needles, m. 329-30.degree., sol. in cold dil. NaOH with intense yellow color, excess of concd. NaOH pptg. a cryst. brick-red Na salt. 5-Nitro-1-methyl-2,3-azimidobenzene, quant. obtained from (a) in cold dil. HCl and the calcd. amt. of  $\text{NaNO}_2$ , yellow needles from dil. alc., m. 252-3.degree., sol. in hot alc.,  $\text{Me}_2\text{CO}$  or AcOH with yellowish color, in concd. HCl and, with intense yellow color, in dil. NaOH, reduced by  $\text{SnCl}_2$ , Sn and concd. HCl to the amino compound, brownish needles losing  $\text{H}_2\text{O}$  of crystn. at 80-5.degree. and m. 161-2.degree., easily sol. in cold dil. alkalis; acetyl derivative, obtained with NaOAc and boiling Ac<sub>2</sub>O, needles from dil. alc., m. 283.degree., insol. in dil. HCl but easily sol. in dil. NaOH, gives with ice-cold NaOH and Ac<sub>2</sub>O the diacetyl derivative, Ag-white needles from  $\text{Me}_2\text{CO}$ , m. 239-40.degree., which, boiled 1 hr. with  $\text{H}_2\text{O}$ , loses AcOH and regenerates the mono-Ac compd. 2,4,5-H<sub>2</sub>N(AcNH)2C<sub>6</sub>H<sub>2</sub>Me, from 2 g. of the  $\text{NO}_2$  compd. added in small portions to 4 g. Fe filings in 100 cc. of warm 5% AcOH, warmed not more than 0.5 hr. (otherwise the imidazole is formed in considerable amt.), dild. with 60 cc. hot  $\text{H}_2\text{O}$ , filtered hot, freed from Fe with solid soda, filtered hot, concd. and crystd. from  $\text{H}_2\text{O}$ , m. 252-3.degree. (cf. Maron, C. A. 6, 362); with somewhat more than the calcd. amt. of  $\text{NaNO}_2$  in cold dil. HCl, it at once gives

L2 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)  
1-methyl-2-acetamino-4,5-acetylazimidobenzene,  $\text{Me}(\text{AcNH})\text{C}_6\text{H}_2\text{NAC.N.N}$ , needles from  $\text{Me}_2\text{CO}$ , m. 220.degree., easily sol. in dil. NaOH and concd. HCl, loses both Ac groups when boiled 5 min. with dil. HCl; boiled 1 hr. with 50 parts  $\text{H}_2\text{O}$  it gives 1-methyl-2-acetamino-4,5-azimidobenzene, needles, m. 235.degree., also obtained by recrystg. the di-Ac compd. twice from  $\text{PhNO}_2$  or evapp. its C<sub>5</sub>H<sub>5</sub>N soln. on the  $\text{H}_2\text{O}$  bath and converted back into the di-Ac compd. with Ac<sub>2</sub>O and cold NaOH; it is sol. in dil. alkalis and in concd. HCl; 1 g. heated on the  $\text{H}_2\text{O}$  bath with 15 cc.  $\text{H}_2\text{O}$ , 5 cc. alc. and 5 cc. concd. HCl gives 1-methyl-2-amino-4,5-azimidobenzene, needles from  $\text{H}_2\text{O}$ , m. 173.degree. (on slow cooling of the aq. soln. it seps. in red-brown prisms with  $\text{H}_2\text{O}$  of crystn. in which it m. 80-3.degree.), sol. in dil. NaOH, gives with concd. HCl a difficultly sol. salt at once dissolving on addition of  $\text{H}_2\text{O}$ . o-Amino-p,m'-dinitrodiphenylamine (b), obtained in 60% yield from 5 g.  $\text{O}_2\text{NC}_6\text{H}_4\text{NH.C}_6\text{H}_3(\text{NO}_2)_2$  in 30 cc. each of warm  $\text{Me}_2\text{CO}$  and alc. treated with 10 g. crystd. Na<sub>2</sub>S in 20 cc. hot  $\text{H}_2\text{O}$ , heated 10 min. on the  $\text{H}_2\text{O}$  bath, cooled, dild. with 4 vols. of  $\text{H}_2\text{O}$ , the brown voluminous ppt. extd. with boiling  $\text{Me}_2\text{CO}$  and a few drops of  $\text{NH}_4\text{OH}$  until the ext. gives no ppt. with  $\text{H}_2\text{O}$ , the  $\text{H}_2\text{O}$  ppt. dissolved in boiling dil. HCl (1:4), pptd. with  $\text{NH}_4\text{OH}$ , allowed to stand some hrs. in the cold and crystd. from dil. alc., red needles, m. 207-8.degree., easily sol. in very dil. HCl, sol. in boiling NaOH with red color and loss of  $\text{NH}_3$ ; acetyl derivative, golden yellow needles from  $\text{Me}_2\text{CO}$ , m. 205.degree., N-m-Nitrophenyl- $\alpha$ -methyl-p-nitrobenzimidazole, from (b) covered with hot Ac<sub>2</sub>O and 1-2 drops concd.  $\text{H}_2\text{SO}_4$ , whereupon the (b) dissolves with energetic reaction, then dild. with  $\text{H}_2\text{O}$ , brought to a boil, filtered and cooled, pptd. from dil. HCl with  $\text{NH}_4\text{OH}$  and crystal. from alc., Ag-white needles, m. 226-7.degree., easily sol. in cold dil. HCl, insol. in cold or hot alkalis, also obtained by heating the above Ac deriv. a short time at its m. p. or boiling it in dil. HCl. N-m-Nitrophenyl-p-nitroazimidobenzene, from (b) and  $\text{NaNO}_2$  in cold dil. HCl, yellow-brown needles from C<sub>5</sub>H<sub>5</sub>N- $\text{H}_2\text{O}$ , m. 181.degree., insol. in HCl or NaOH. N-m-Aminophenyl-p-aminoazimidobenzene, from 1 g. of the di- $\text{NO}_2$  compd., 2.5 g.  $\text{SnCl}_2$  and a little Sn cautiously warmed on the  $\text{H}_2\text{O}$  bath with 5 cc. concd. HCl until a clear soln. results, dild. with  $\text{H}_2\text{O}$ , filtered, supersatd. with cold NaOH, repeatedly pptd. from cold dil. HCl with NaOH, dried on clay, dissolved in hot  $\text{Me}_2\text{CO}$ , treated with an equal vol. of hot  $\text{H}_2\text{O}$  and slowly freed from  $\text{Me}_2\text{CO}$  on the  $\text{H}_2\text{O}$  bath, brownish needles, m. 214-5.degree., easily sol. in dil. HCl; when covered with Ac<sub>2</sub>O it dissolves with evolution of heat and at once deposits the diacetyl derivative, sepp. from alc.- $\text{H}_2\text{O}$  in gelatinous flocks which dry on clay to gleaming scales, m. 248-9.degree.. For details concerning the prepn. of the azo dyes and the dyeing expts. cf. R.'s dissertation (Zurich, 1915).

L2 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1915:4757 CAPLUS

DOCUMENT NUMBER: 9:4757

ORIGINAL REFERENCE NO.: 9:7190-h

TITLE: Microscopic studies on cotton

AUTHOR(S): Herzog, A.

SOURCE: Chemiker-Zeitung (1914), 38, 1089-91.1097-1100

CODEN: CMKZAT; ISSN: 0009-2894

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

ABSTRACT:

Dead and unripe fibers both have very thin cell-walls, and are not solid, as has been often stated. The former are collapsed tubes, having opposite walls in contact and are irregularly twisted. The cell-walls are thin and transparent (0.5-0.6  $\mu$ ). The width exceeds that of ripe or half ripe fibers by 31-65%. Oblique striations (45.degree.) are observed, and those of the under wall show through, causing the fiber to be marked by lines. The lumen contains very little dried albuminous matter. Dead fibers dissolve more slowly in not too strong Cu-ammonia soln. than ripe fibers. The cuticle is not highly developed as is shown by the use of Ru red (A. Herzog, C. A. 6, 2171). Bubble-like swellings which occur in ripe fibers are never observed. The ultramicroscope shows that the micellae lie in a direction parallel to the length of the fiber. Comparisons of dyed dead fibers and sections of the same thickness from dyed ripe fibers indicate that the light color of dead fibers is due solely to their smaller optical thickness. Dead fibers are doubly refractive, although only the lower first-order colors appear between crossed nicols. With an interposed mica plate (1/6  $\lambda$ ), dead fibers appear white or black, according to their position relative to the axes of the plate and the position of the nicols. Ripe or unripe fibers, on the other hand, show no such regular black or gray colors. Unripe fibers are very similar in form and optical properties to dead fibers, and behave similarly in textiles. The cell walls are somewhat thicker, being at least 1  $\mu$  in thickness. The quantity of protoplasmic residue is larger than in dead fibers. No stratification of cell walls is seen, and none is shown by swelling agents. With \*\*\*substantive\*\*\* dyes, unripe fibers give deeper colors than dead fibers, on account of the contents of the lumen. The walls of neither are dyed. The width of unripe fibers is nearly the same as that of ripe fibers. The morphological characteristics of three classes of beard hairs are minutely described. An exam. of the raw stock and mercerized product in a large number of factory lots showed that those samples which yielded an unsatisfactory luster contained relatively more unripe fibers or fibers which for other reasons did not undergo the usual changes during mercerization. By sampling a given lot of cotton and observing the behavior of a relatively large number of fibers (microscopically) when treated with KOH soln., H. finds it possible to judge of the results to be expected in mercerization in factory practice.

L2 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN

(Continued)

L2 ANSWER 16 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1914:10151 CAPLUS

DOCUMENT NUMBER: 8:10151

ORIGINAL REFERENCE NO.: 8:1511a-e

TITLE: The dyeing of hair and hair substitutes

AUTHOR(S): Seidel, Albert

CORPORATE SOURCE: Leipziger

SOURCE: Faerber-Zeitung (1914), 63, 3-5

CODEN: FAZTAZ

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

ABSTRACT:

Treatment previous to dyeing consists in washing the hair in a bath containing 50 g. soap, 20-100 g. anhydrous Na<sub>2</sub>CO<sub>3</sub>, or an equiv. amt. of the cryst. salt, or NH<sub>4</sub>OH, in 100 l. at 30-40.degree. for 10-20 min., followed by draining and thorough rinsing. This bath may be used again after strengthening. Procedure for exceptional cases is given. To make it take up dye, material contg. much dead hair is freed from fat and dirt, then placed for 15-20 min. in a bath contg. 1.5-2.0 g. HCl, 22.degree. 8.acts.e., per l., then drained and placed for 30 min. in a weak bleaching powder bath of 0.2.degree. 8.acts.e., after which it is returned to the HCl bath for 15-20 min., and then rinsed until acid-free. The treatment in the bleach bath may be repeated, or a bath of 0.5.degree. 8.acts.e., but not stronger, may be used. The bleach bath must be clear and should be filtered through cotton when necessary. Dyeing with acid dyestuffs is done in a boiling bath, to which 5-8% AcOH. Or 2-4% H<sub>2</sub>SO<sub>4</sub>, or 5-10% tartaric acid prep., or 2-4% of 85% HCOOH have been added, the goods remaining in the bath about 1 hr. Basic dyes are used in neutral or weak AcOH baths at 50-70.degree.. Artificial dyes have almost entirely replaced logwood for dyeing black. Substantive dyes are seldom used with hair, but are preferred for vegetable \*\*\*hair\*\*\* substitutes. Sisal is dyed in a bath containing 2 g. NH<sub>4</sub>OH, 0.5 g. Na<sub>2</sub>CO<sub>3</sub>, 5 g. Na<sub>2</sub>SO<sub>4</sub>, and 2-3 g. patent dianiline black to each 100 g. of fiber. The bath is boiled 30 min. with steam and allowed to stand 30 min. longer, then drained, washed and dried. Manila hemp and other fibers are dyed like sisal but should remain longer in the bath, and require about 1/3 more of the dye. These fibers should be boiled and rinsed before dyeing. Many formulas are given for different colors, and detailed directions for special cases.